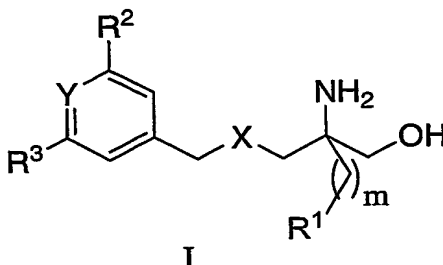


WHAT IS CLAIMED IS:

1. A compound of formula (I):



5 wherein:

X is O or NH;

Y is CH or N;

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R¹ is (1) aryl selected from the group consisting of phenyl and naphthyl, or
 (2) heterocyclyl selected from the group consisting of piperazinyl, piperidinyl,
 pyrrolidinyl, pyrazinyl, dihydropyrazinyl, pyrazolyl, dihydropyrazolyl, pyridazinyl,
 pyridyl, dihydropyridinyl, pyrimidinyl, dihydropyrimidinyl, pyrrolyl, dihydropyrrolyl,
 15 tetrazolyl, dihydrotetrazolyl, furanyl, dihydrofuranyl, tetrahydrofuranyl, imidazolyl,
 dihydroimidazolyl, triazinyl, pyranyl, tetrahydropyranyl, thiazolyl, thienyl,
 dihydrothienyl, thiophenyl, triazolyl, dihydrotriazolyl, morpholinyl, thiomorpholinyl,
 dihydrothiadiazolyl, tetrahydrothienyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl,
 indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

20

wherein said aryl or heterocyclyl is unsubstituted or substituted with one or more

- (a) halo,
- (b) -C₁₋₆alkyl,
- (c) -C₂₋₆ alkenyl,
- 25 (d) -C₂₋₆ alkynyl,
- (e) -OH,
- (f) -CN, or
- (g) -O-C₁₋₆alkyl;

R² is selected from the group consisting of:

(1) R⁴-S(O)₂N(R⁷)-, wherein R⁴ is C₁-6alkyl, wherein said alkyl is unsubstituted or substituted with one or more

- (a) halo,
- (b) -C₁-6alkyl,
- (c) -OH,
- (d) -CN, or
- (e) -O-C₁-6alkyl; and

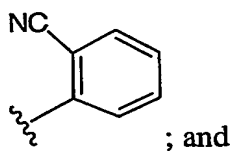
R⁷ is selected from the group consisting of

- (a) hydrogen, and
- (b) -C₁-6alkyl,

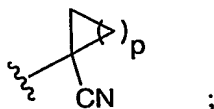
wherein said alkyl is unsubstituted or substituted with one or more

- (i) halo,
- (ii) -C₁-6alkyl,
- (iii) -OH,
- (iv) -CN, or
- (v) -O-C₁-6alkyl;

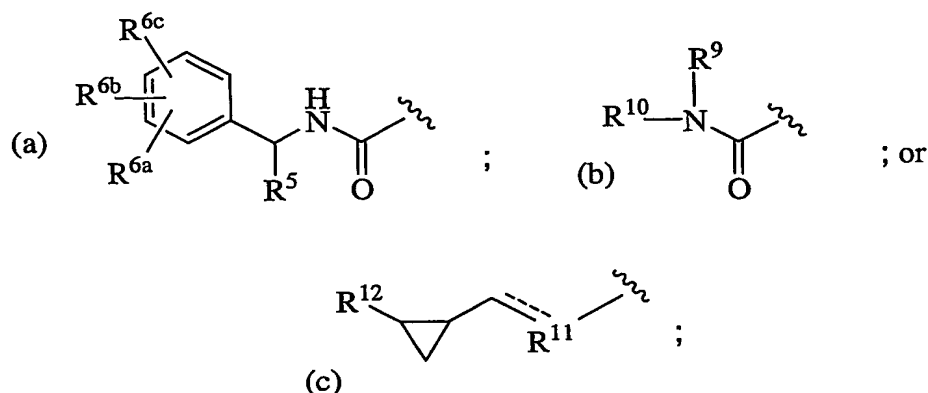
(2)



(3)



R³ is selected from the group consisting of:



wherein R⁵ is C₁₋₆alkyl, C₂₋₆ alkenyl or C₂₋₆ alkynyl;

R^{6a}, R^{6b}, and R^{6c} are independently selected from the group consisting of:

- 5 (1) hydrogen,
- (2) halo,
- (3) -C₁₋₆alkyl,
- (4) -C₂₋₆ alkenyl,
- (5) -C₂₋₆ alkynyl,
- 10 (6) -OH,
- (7) -CN, and
- (8) -O-C₁₋₆alkyl;

R⁹ and R¹⁰ are independently selected from the group consisting of:

- 15 (1) hydrogen, and
- (2) C₁₋₆alkyl,
- (3) -C₂₋₆ alkenyl, and
- (4) -C₂₋₆ alkynyl,

or R⁹ and R¹⁰ are joined together with the nitrogen atom to which they are attached to form a pyrrolidine ring, which is optionally substituted with

- 20 (a) C₁₋₆alkyl,
- (b) -C₂₋₆ alkenyl,
- (c) -C₂₋₆ alkynyl,
- (d) (CH₂)_n-phenyl, and
- (e) (CH₂)_n-furanyl;

- 25 wherein said alkyl, phenyl and furanyl are unsubstituted or substituted with one or more
- i) halo,

- ii) -C₁₋₆alkyl,
- iii) -OH,
- iv) -CN, or
- v) -O-C₁₋₆alkyl; and

5 R¹¹ is selected from the group consisting of

- (1) -CH-,
- (2) -O-, and
- (3) -NH-,

provided that when R¹¹ is -CH- the dotted line forms a bond and when R¹¹ is -O- or -NH- the dotted

10 line is absent;

R¹² is hydrogen, C₁₋₆ alkyl, C₂₋₆ alkenyl or C₂₋₆ alkynyl;

m is 1 or 2;

15 n is 0, 1, 2, 3 or 4;

p is 1, 2, 3 or 4;

and pharmaceutically acceptable salts thereof.

20 2. The compound of Claim 1, wherein m is 1 and R¹ is phenyl unsubstituted or substituted with one or more chloro or fluoro.

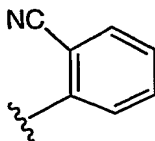
3. The compound of Claim 1, wherein m is 2 and R¹ is phenyl unsubstituted or substituted with one or more chloro or fluoro.

25 4. The compound of Claim 1, wherein m is 1 and R¹ is thiophenyl.

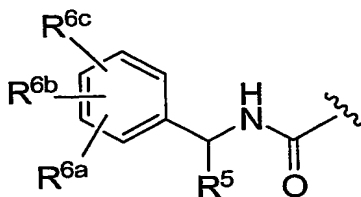
5. The compound of Claim 1, wherein R² is (R⁴)-S(O)₂N(R⁷)- and R⁷ is C₁₋₆ alkyl.

6. The compound of Claim 5 wherein R⁴ and R⁷ are each methyl.

30 7. The compound of Claim 1, wherein R² is

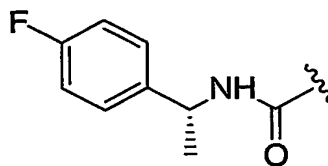


8. The compound of Claim 1 wherein R³ is

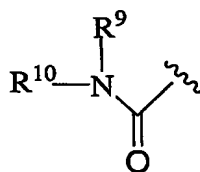


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9. The compound of Claim 8 wherein R⁵ is methyl.
10. The compound of Claim 9 wherein R^{6a} and R^{6c} are hydrogen and R^{6b} is fluoro.
11. The compound of Claim 10, wherein R³ is



12. The compound of Claim 1 wherein R³ is

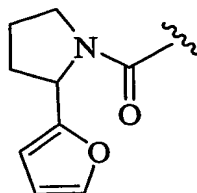


and R⁹ and R¹⁰ are joined together with the nitrogen atom to which they are attached to form a pyrrolidine ring which is unsubstituted or substituted with

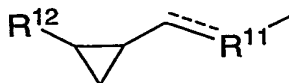
- (a) C₁₋₆alkyl,
 (b) (CH₂)_n-phenyl, or
 (c) (CH₂)_n-furanyl.

13. The compound of Claim 12 wherein R⁹ and R¹⁰ are joined together with the nitrogen atom to which they are attached to form a pyrrolidine ring which is substituted with $-(CH_2)_n$ -furanyl wherein n is 0.

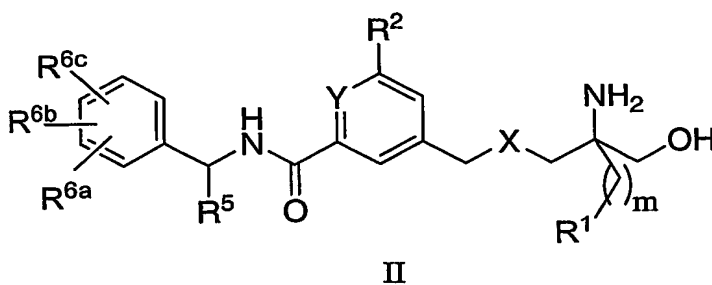
5 14. The compound of claim 13, wherein R³ is



15. The compound of Claim 1 wherein R³ is



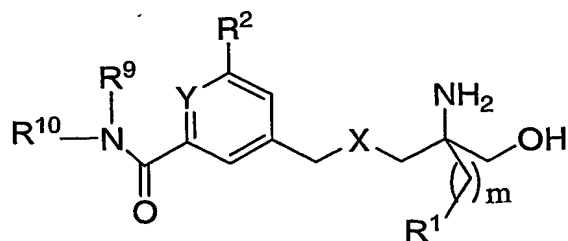
16. The compound of Claim 1 of formula II:



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wherein X, Y, R¹, R², R⁵, R^{6a}, R^{6b}, R^{6c} and m are as defined in Claim 1.

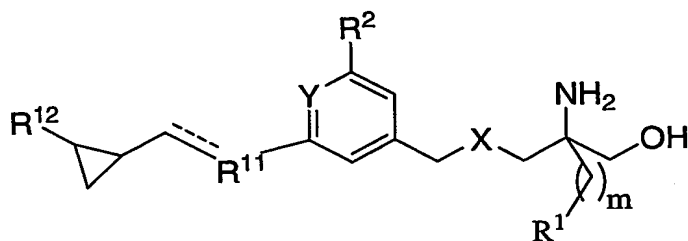
17. The compound of Claim 1 of formula (III):



III

wherein X, Y, R¹, R², R⁹, R¹⁰ and m are as defined in Claim 1.

- 5 18. The compound of Claim 1 of formula (IV):

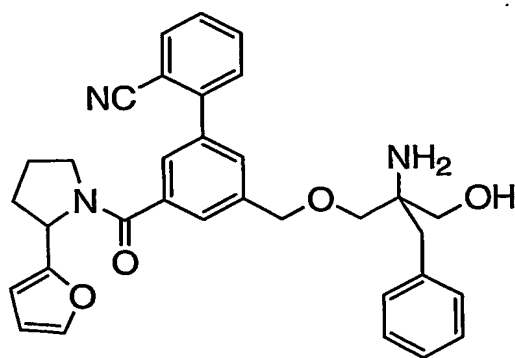


IV

g

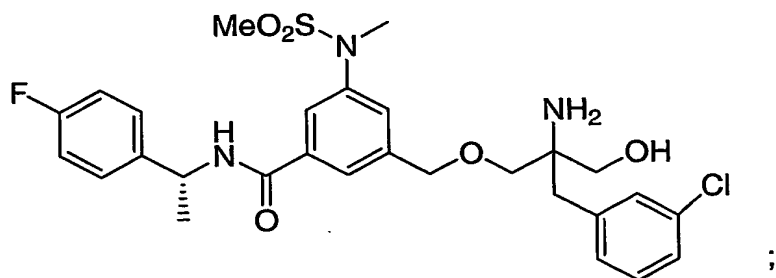
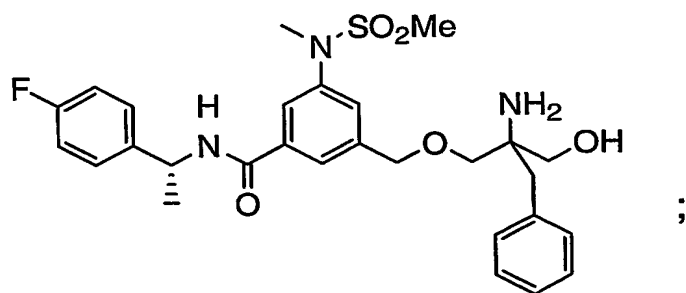
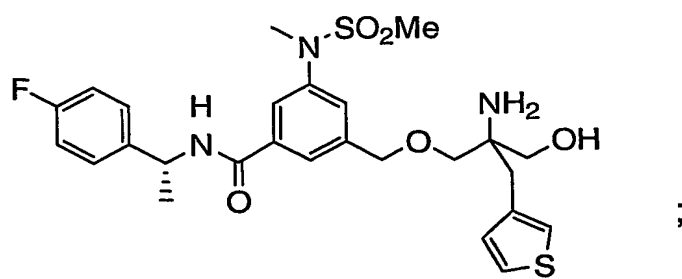
wherein X, Y, R¹, R², R¹¹, R¹² and m are as defined in Claim 1.

19. The compound of Claim 1 which is selected from the group consisting of:

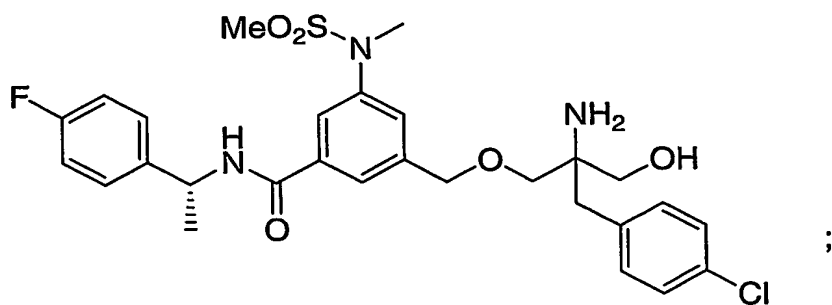


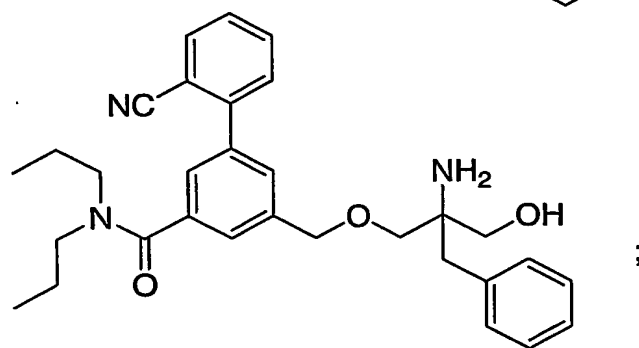
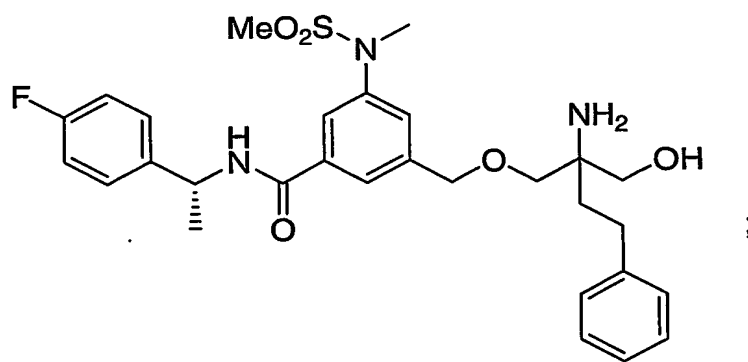
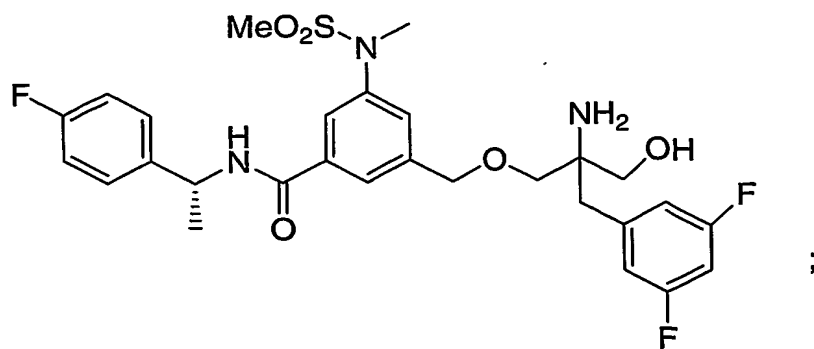
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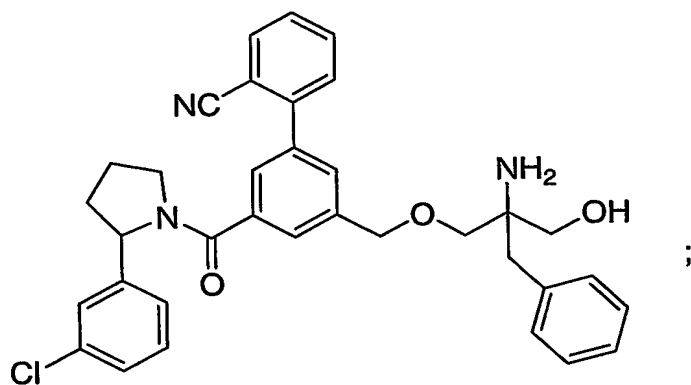
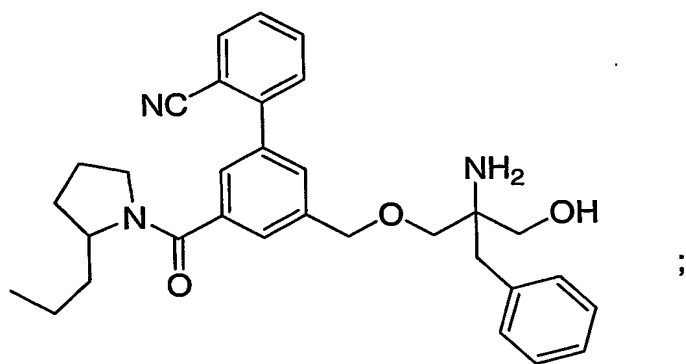
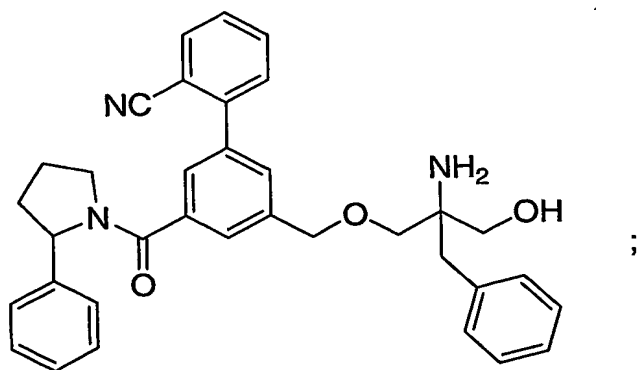
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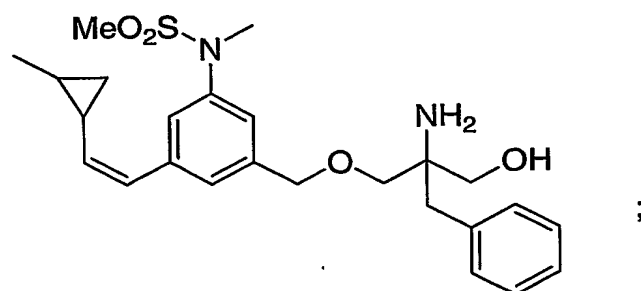
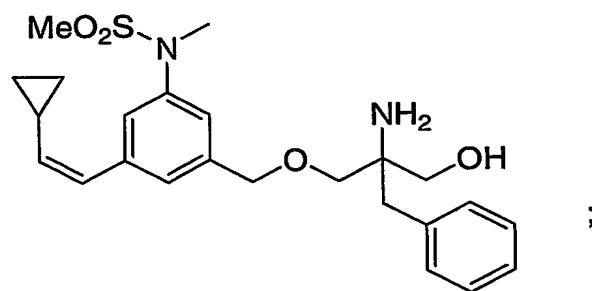
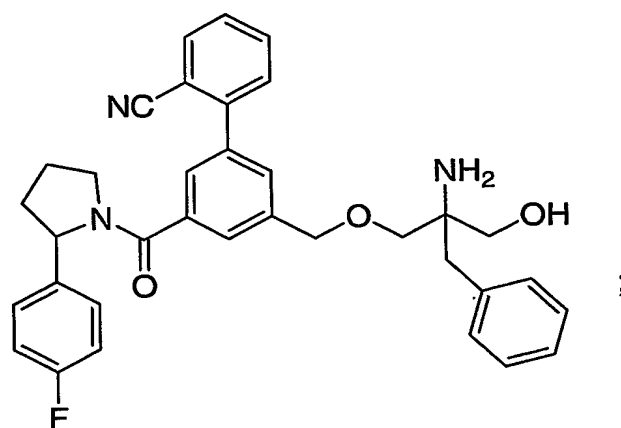
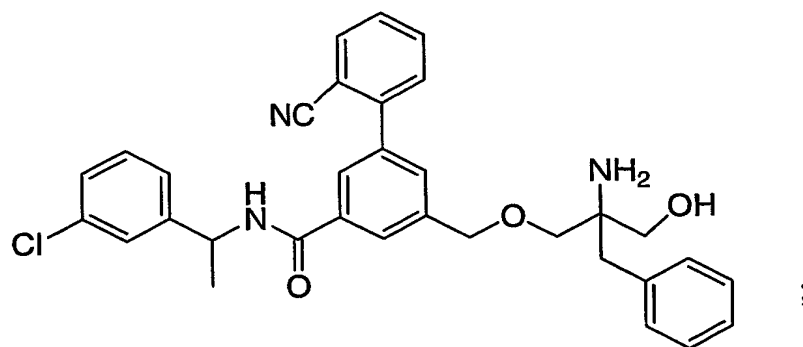


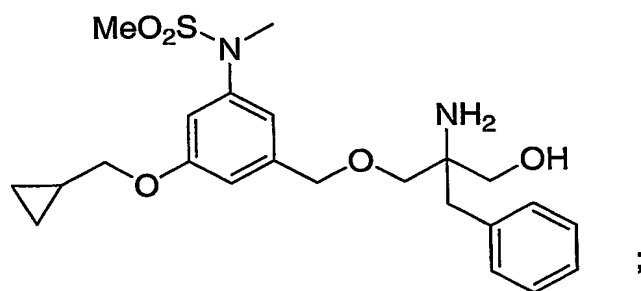
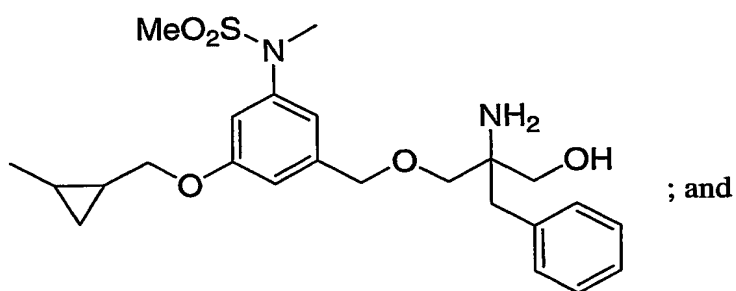
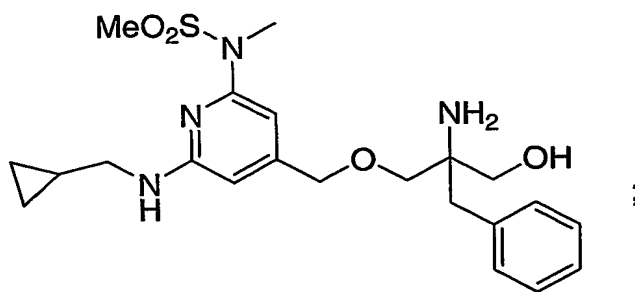
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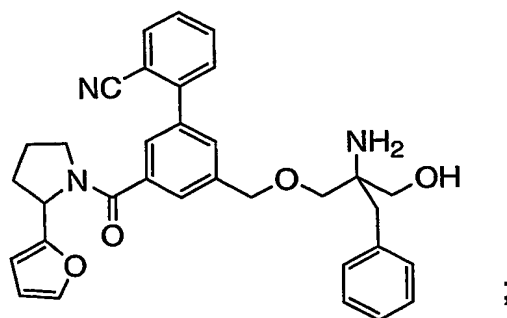


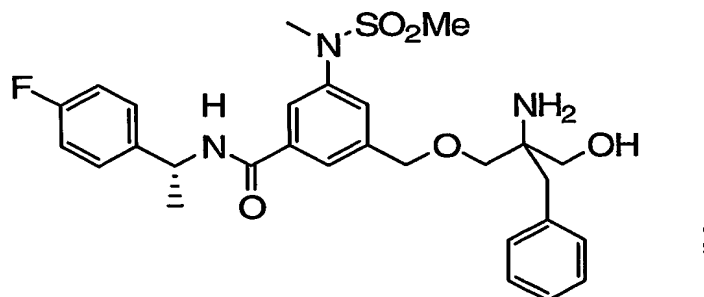
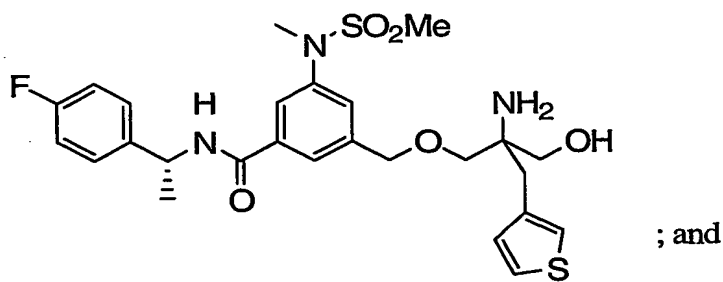
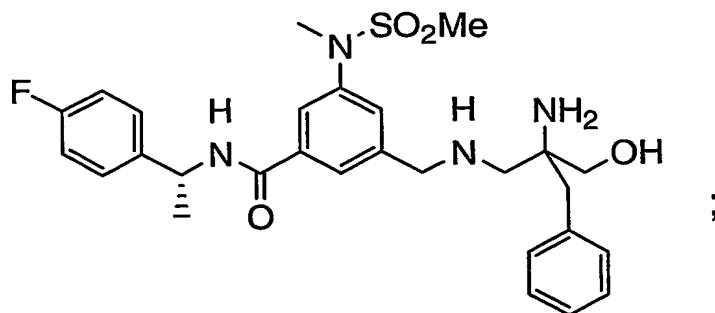




5 and pharmaceutically acceptable salts thereof.

20. The compound of Claim 19 which is selected from the group consisting of





and pharmaceutically acceptable salts thereof.

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21. A pharmaceutical composition comprising an effective amount of a compound of Claim 1 and a pharmaceutically acceptable carrier.

22. A method for inhibition of β -secretase activity in a mammal in need thereof which comprises administering to the mammal a therapeutically effective amount of a compound of Claim 1.

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23. A method for treating Alzheimer's disease in a patient in need thereof comprising administering to the patient an effective amount of a compound of Claim 1.

24. A method for treating Alzheimer's disease in a patient in need thereof comprising administering to the patient an effective amount of a compound of Claim 1.